

REMARKS

The present Amendment is in response to the Office Action having a mailing date of December 24, 2003. Claims 1-11 are pending in the present Application. Applicant has amended claims 1, 6, and 10. Consequently, claims 1-11 remain pending in the present Application.

Applicant has amended claims 1 and 6 to more clearly indicate that the write head is a pedestal defined zero throat write head. Consequently, claim 1 has been amended to recite that the second pole has a bottom surface, a portion of which extends over the pedestal and along the gap beyond the back of the pedestal and is substantially flat such that a zero throat height of the write head is defined by the pedestal. Claim 6 has been amended in an analogous fashion. Support for the amendment can be found in Figures 2A, 2B, 3A, and 3B (see the portion above the write gap 140 and 190 versus the pedestal 112 and 162). Because claims 1 and 6 previously recited a pedestal defined zero throat write head and a method for providing a pedestal defined zero throat write head, Applicant respectfully submits that the amendment to claims 1 and 6 does not narrow the scope of claims 1 and 6. Claim 10 has been amended to harmonize claim 10 with claim 1. Consequently, Applicant respectfully submits that the amendment to claim 10 does not narrow the scope of claim 10. Furthermore, Applicant respectfully submits that no new matter is added.

In the above-identified Office Action, the Examiner objected to the specification. In particular, the Examiner objected to the title.

Applicant has replaced the title with "Pedestal Defined Zero Throat Writer Having a Recessed Pedestal." Applicant respectfully submits that the current title is descriptive of the invention(s) to which the claims are directed. Accordingly, Applicant respectfully submits that the Examiner's objection to the specification has been overcome.

In the above-identified Office Action, the Examiner rejected claims 1-11 under 35 U.S.C. § 102(e) as being anticipated by U. S. Patent No. 6,624,971 (Sasaki). In so doing, the Examiner specifically referenced the structures depicted in Figures 3A, 4A, and 6, particularly items 7 (likened to the recited first pole), 9 (likened to the recited write gap), and 27A.

Applicant respectfully traverses the Examiner's rejection. Claim 1 recites a pedestal defined zero throat (PDZT) write head including a first pole having a pedestal, a second pole, and a gap between the first pole and a portion of the second pole. Claim 1 further recites that the pedestal has a front, a back, a top and a bottom. The back of the pedestal is recited as having a recess that runs from the top of the pedestal to the bottom of the pedestal. Further clarifying that the PDZT head has a pedestal defined zero throat position, claim 1 recites that the second pole has a bottom surface. A portion of the surface extends over the pedestal and along the gap beyond the back of the pedestal and is substantially flat such that a zero throat height of the write head is defined by the pedestal. Two embodiments of such a write head is depicted in Figures 2A-2B and 3A-3B. As can be seen in these embodiments, the pedestal 112 and 162 has a recess, or notch, 114 and 164, respectively, at the back (away from the ABS). Furthermore, the flat portion of the top pole 130 and 180 above the write gap 140 and 190, respectively, extends above and beyond (farther away from the ABS) the pedestal 112 and 162, respectively. Consequently, in the embodiments shown, the zero throat position 142 and 192 and, therefore, the throat height are defined by the pedestal. More specifically, the back, recessed portion of the pedestal defines the zero throat height.

Because of the use of the recessed pedestal having a reduced throat height, the PDZT head 100 and 150 exhibit a lower rise time, improved writeability, and less inadvertent writing of adjacent tracks. Specification, page 5, lines 11-19 and page 6, line 18-page 7, line 2. Moreover,

the PDZT head 100 is less likely to be subject to shorting between the poles. Specification, page 5, lines 20-22.

The cited portions of Sasaki fail to teach or suggest a PDZT write head in which the pedestal has a recess at the back and in which the zero throat height is defined by the pedestal because the bottom surface of the other pole is substantially flat beyond the pedestal. Applicant agrees that the items 7, 9, and 27A of Sasaki are the first (bottom) pole, the write gap, and the top pole tip, respectively, of Sasaki. Sasaki specifically states that the top pole tip is shaped with a recess 60. Sasaki, col. 11, lines 13-19 and Figures 5-9. However, Sasaki also states that "with the top pole tip 27A as a mask, the write gap layer 9 and the bottom pole 7 around the front end portion 27A(1) and the intermediate coupling portion 27A(2) are etched about .5 μm in a self-aligned manner, thereby forming a trim structure." Sasaki, col. 11, lines 39-43. Thus, both the top pole 27(A) and the bottom pole 7 are trimmed such that they recede slightly around the structure 27(A) and presumably such that both include the notch 60. This can be seen in Figure 6 (depicting pole tip 27(A) and the portion of the first pole 7 that has been trimmed) and Figure 7 (also depicting a portion 27C of the second pole that is further from the first pole 7 than the pole tip 27A). Applicant presumes that it is this trimmed structure of the first pole 7 that the Examiner analogizes to the pedestal. However, because the pole tip 27A is used as a mask, the second pole 27 does not have a flat portion that extends over and beyond the pedestal (trimmed portion) of the first pole 7. Similarly, due to its trimmed portion, the first pole 7 does not have a flat portion that extends beyond the pole tip 27A of the second pole. Instead, neither pole has a surface is substantially flat over and beyond the pedestal such that the zero throat height is defined by the pedestal. Consequently, the second pole 27 does not allow a pedestal of the first pole 7 to define the zero throat height. Thus, the system of Sasaki does not teach or suggest the recited PDZT head.

Moreover, Sasaki states that the

throat height TH is defined as a length from the position of an edge face T1 [of the top pole tip 27A] which defines the position of an edge closest to the air bearing surface 20 in the insulating layer 30 formed on the rear side (side opposite to the air bearing surface) of the pole tip 27A to the air bearing surface 30.

Sasaki, col. 12, lines 26-31. Thus, cited portion of Sasaki explicitly states that it is the top (second) pole 27A rather than the first pole 7 that defines the throat height and thus the zero throat position. This is in contrast to the recited PDZT head in which the recess of the pedestal defines the zero throat position. Consequently, the cited portion of Sasaki fails to teach or suggest the PDZT head and method recited in claims 1 and 6. Accordingly, Applicant respectfully submits that claims 1 and 6 are allowable over the cited references.

Claims 2-5 and 7-11 depend upon independent claims 1 and 6, respectively. Consequently, the arguments herein apply with full force to claims 2-5 and 7-11. Accordingly, Applicant respectfully submits that claims 2-5 and 7-11 are allowable over the cited references.

Furthermore, Applicant respectfully submits that claims 3 and 9 are separately allowable over the cited references. Claim 3 recites the PDZT head of claim 1 “wherein the recess includes a first edge and a second edge, the first edge and the second edge being outside of the second pole.” Claim 9 recites an analogous method for forming such a PDZT head. One embodiment of such a head is depicted in Figures 2A and 2B, in which the edges of the recess 114 lie outside the top pole 130. Because the edges of the recess for the pedestal lie outside the second pole, the poles are less likely to short. Specification, page 5, lines 21-24.

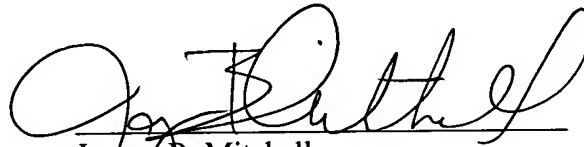
In contrast, as discussed above, Sasaki specifically states that the top pole tip is used as a mask to trim the bottom pole. Sasaki, col. 11, lines 37-44. Consequently, the edges of any recess in either the top pole tip or the bottom pole are at substantially the same location. Thus, to

the extent that the cited portion of Sasaki teaches a pedestal having a shape of that matches the top pole tip 27A(1), 27A(2), and 27A(3), the cited portion of Sasaki also teaches away from having a pedestal having a notch with edges outside of the top pole tip. Consequently, the cited portion of Sasaki does not teach or suggest a PDZT head in which the edges of the recess in the pedestal are outside of the pole or a method of forming such a PDZT head. Accordingly, Applicant respectfully submits that claims 3 and 9 are separately allowable over the cited references.

Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,

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